

# 借鑒國際時裝品牌： 其可持續發展理念與實踐

香港理工大學時裝及紡織學院副教授  
盧君宇博士

可持續時裝及創新文學碩士  
(課程發展委員會主席及課程主任)

- What's the average carbon footprint of producing a pair of sneakers?
  
- A) 6 KG
- B) 9 KG
- C) 13 KG
- D) 18 KG
- E) 20 KG



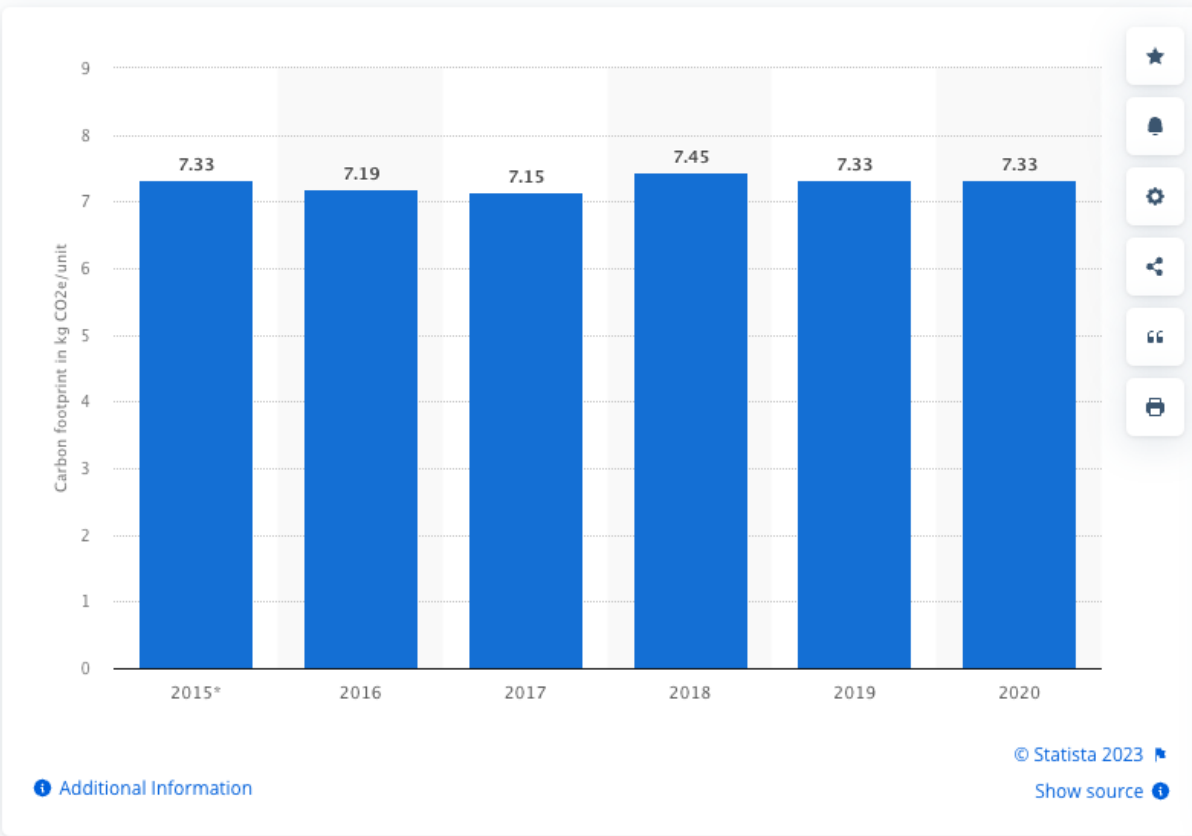


Energy & Environment > Emissions

PREMIUM +

# Average carbon footprint of Nike products from FY 2015 to FY 2020

(in kilograms of carbon dioxide equivalent per unit)



### DOWNLOAD

PDF XLS PNG PPT

### Source

- Show sources information
- Show publisher information
- Use Ask Statista Research Service

### Release date

March 2021

### Region

Worldwide

### Survey time period

FY 2015 to FY 2020

### Supplementary notes

\*Baseline

### Citation formats

View options



Andrea Carrillo

Sep. 16, 2022

**STYLE**

**Asics made a sneaker with the world's lowest carbon footprint**

The Gel-Lyte III CM 1.95 emits only 1.95kg of CO2e per pair.

1.95 KG CO2 per pair!



All the biggest shoe dogs are competing to see who can make the sneaker with the least environmental impact. Adidas and Allbirds are reigning champions with their joint [Futurecraft.Footprint](#), which only emits 2.94kg of CO2e per pair. Asics, however, has just taken the title with the Gel-Lyte III CM 1.95, a shoe with the lowest carbon footprint ever achieved in a commercial sneaker.



MEN WOMEN KIDS SOCKS SALE

allbirds

SUSTAINABILITY BERUN STORES



## Introducing M0.ONSHOT: The World's First Net Zero Carbon Shoe

REVEALED JUNE 2023. AVAILABLE SPRING 2024.

The landmark 0.0 kg CO<sub>2</sub>e carbon footprint—versus the industry average of 14 kg CO<sub>2</sub>e—will be achieved without relying on a single carbon offset.

Chat

# Brands' Carbon Neutrality Goals








INDITEX

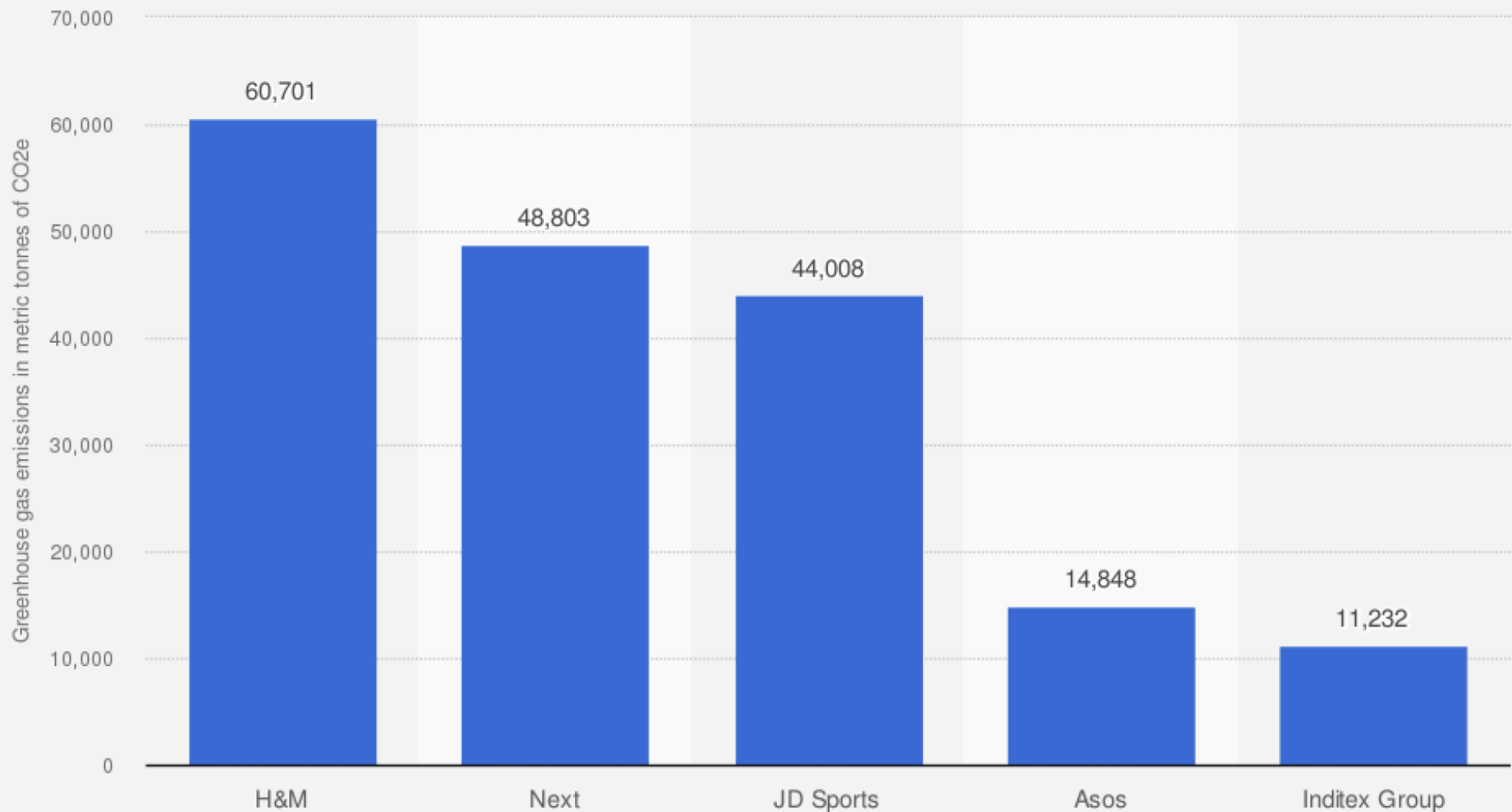


patagonia®



Goals	Brands
<p><i>Reduce the group's absolute scope 1 and 2 emissions and scope 3 emissions by 56% by 2030. This will help the company reach its long-term goal of achieving net zero emissions by 2040.</i></p>	
<p><i>Reduce our greenhouse gas emissions with a view to becoming net zero by 2040</i></p>	
<p><i>Cutting the carbon footprint of all products by half by 2025, and to less than 1kg CO2e per pair of sneakers by 2030</i></p>	
<p><i>Reduce greenhouse gas emissions by 90% by FY2030 (compared with FY2019)</i></p>	
<p><i>To become carbon neutral by 2025</i></p>	

## Annual scope one and two carbon emissions released by leading European apparel retailers in 2022 (in metric tonnes of carbon dioxide equivalents)



### Sources

Various sources; Statista  
© Statista 2023

### Additional Information:

Europe; Various sources; 2020 to 2022

- **Behavioural Theory of the Firm (BTF)**
- **Managers pay sequential attention to goals and apply aspiration levels to each goal.**
- Performance feedback – the future goal is subject to the current performance relative to peer firms' and self historical performance
- **How does performance feedback affect firms setting an ambitious carbon neutral goal?**



# Ambitions in corporate carbon-neutrality goal setting: Consequences and antecedents

Based on US Manufacturing Firms listing in the US stock markets  
Year 2002 – 2022

Table 2: Abnormal Returns of the 144 Carbon-Neutrality Goal setting Announcements (H1)

	day -1	day 0	day -1 to 0
n	144	144	144
Mean abnormal return	-0.186%	-0.691%	-0.854%
T-statistic	-1.184	-3.971***	-3.6325***
Median abnormal return	-0.116%	-0.351%	-0.465%
Wilcoxon signed-rank Z-statistic	-0.87	-3.552***	-3.386***
% negative	52.08%	61.81%	60.42%
Binomial sign test Z-statistic	-0.870	-3.552***	-3.386***

\*p < 0.1; \*\*p < 0.05; \*\*\*p < 0.01

□

# Cumulative Abnormal Return: Mean & 95% Confidence Limits

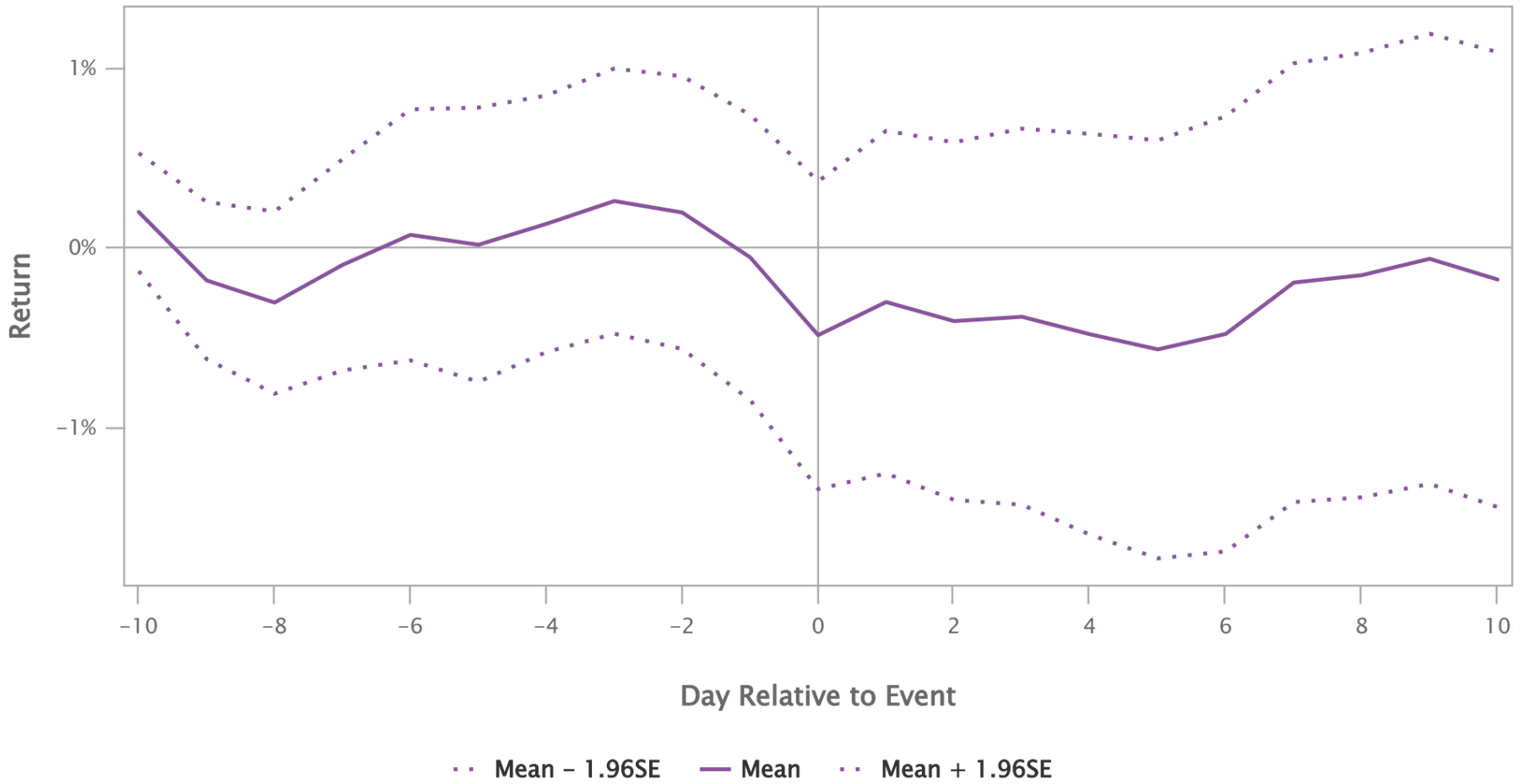
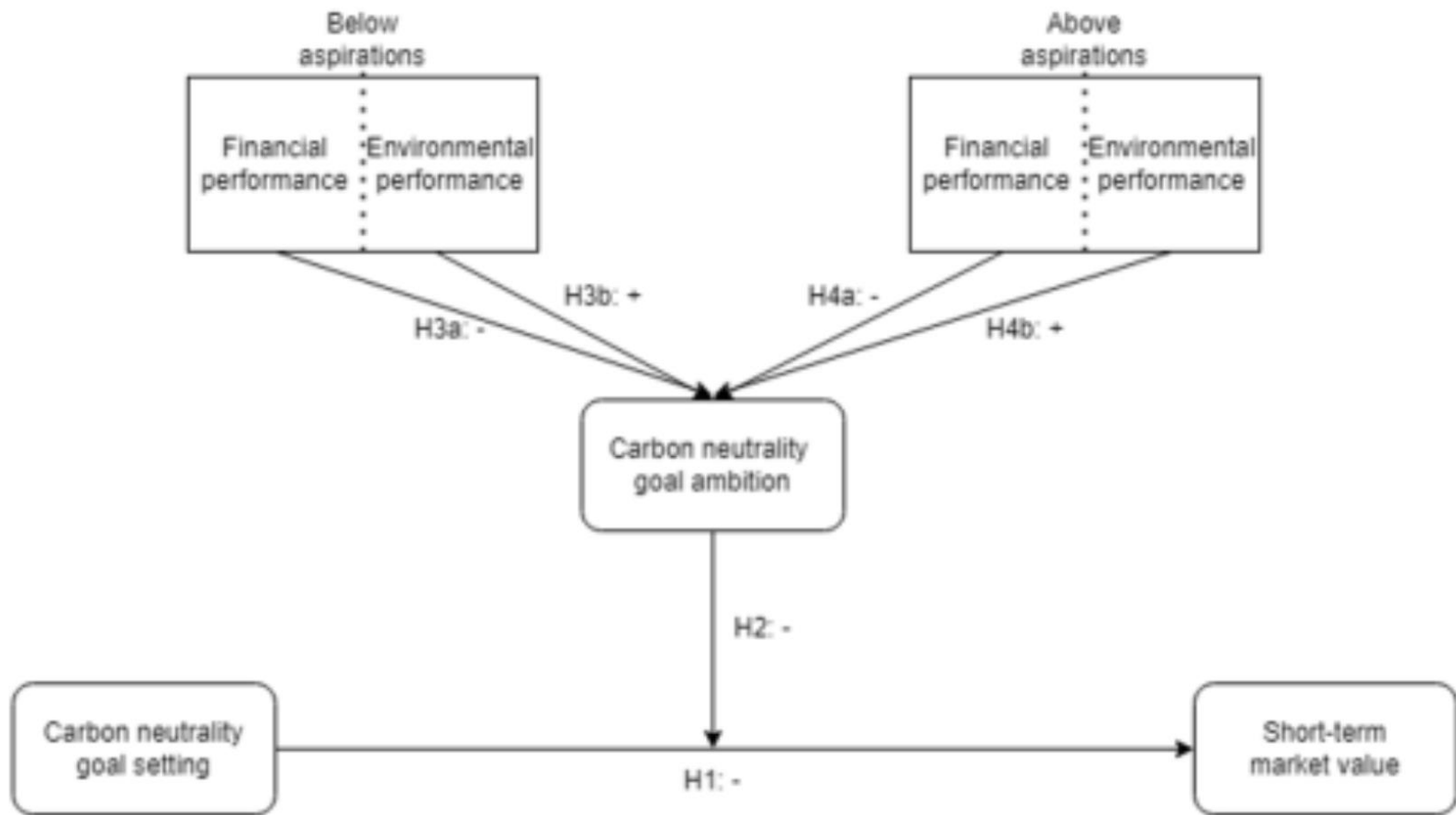


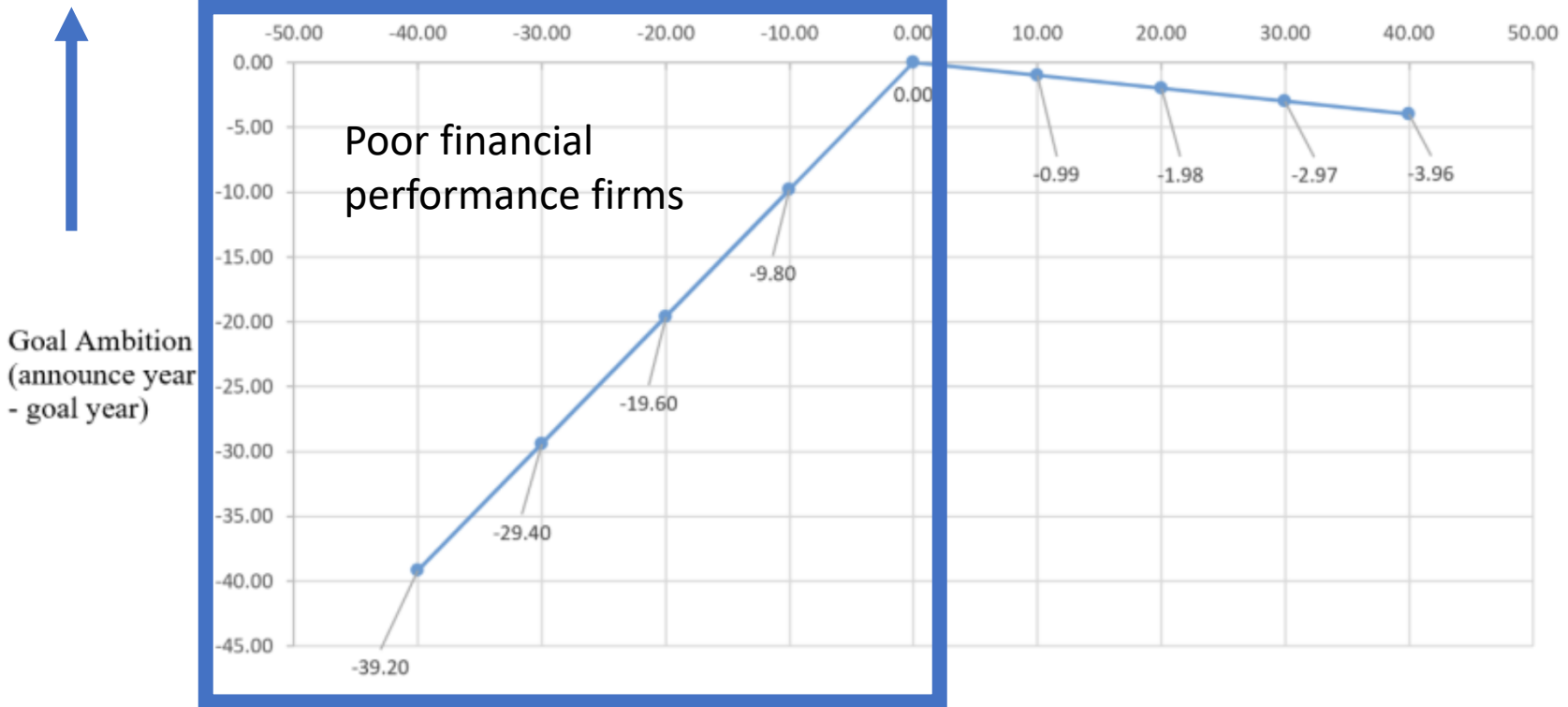
Figure 1: Theoretical Framework of Hypotheses



Wang, Fan, Lo, Yeung 2023 (Major revision in Journal of Operations Management)

	Model 1 (H2)			Model 2 (H3a & H4a)			Model 3 (H3b & H4b)		
	Based on Equation (5), n=144			Based on Equation (6), n=113			Based on Equation (7), n=113		
	DV: CAR (-1 to 0)			DV: Goal ambition			DV: Goal ambition		
IV	Coefficient	Robust Std. Error	p	Coefficient	Robust Std. Error	p	Coefficient	Robust Std. Error	p
Goal ambition	-0.002	0.001	0.002						
FP above aspiration				-0.099	0.047	0.043			
FP below aspiration				0.98	0.544	0.082			
FP aspiration dummy				0.182	5.521	0.974			
EP above aspiration							0.306	0.112	0.011
EP below aspiration							-0.611	0.277	0.035
EP aspiration dummy							-0.611	3.276	0.047
Control Variables	Included			Included			Included		
Industry dummy	Included			Included			Included		
Year dummy	Included			Included			Included		
Chi-squared	1286.197		0.000	1969.688		0.000	369.228		0.000
R-squared	60.9%			83.8%			85.8%		
Adjusted R-squared	30.4%			64.2%			68.8%		

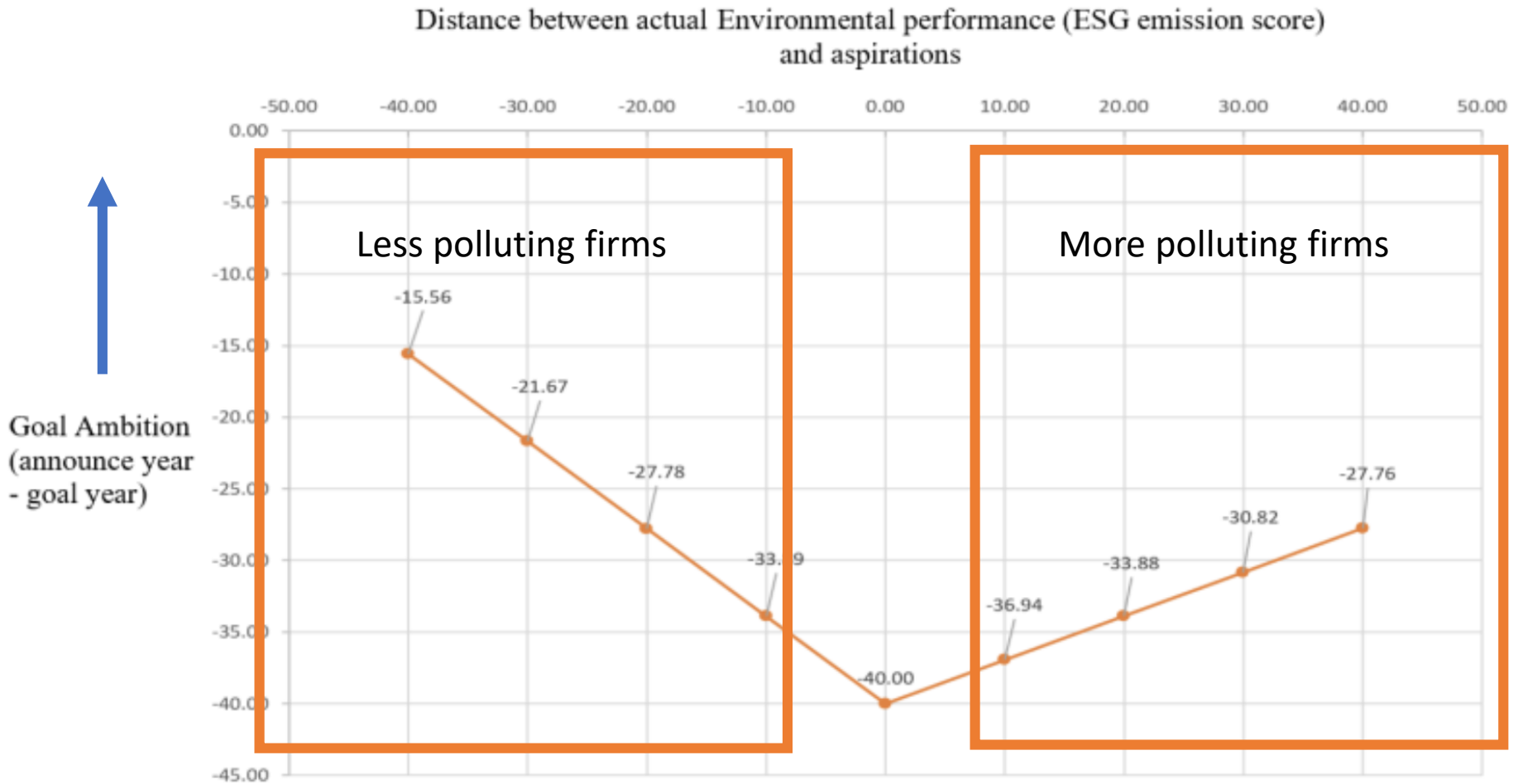
Figure 2: Relationship Between Financial Aspirational Performance and Carbon-Neutrality Goal Ambition



A further 10.2% decrease in ROS may decrease the ambition to achieve carbon-neutrality by ten years



Figure 3: Relationship Between Environmental Aspirational Performance and Carbon-Neutrality Goal Ambition



A further 22.64% decrease or 45.20% increase in ESG emission score may increase the ambition by ten years

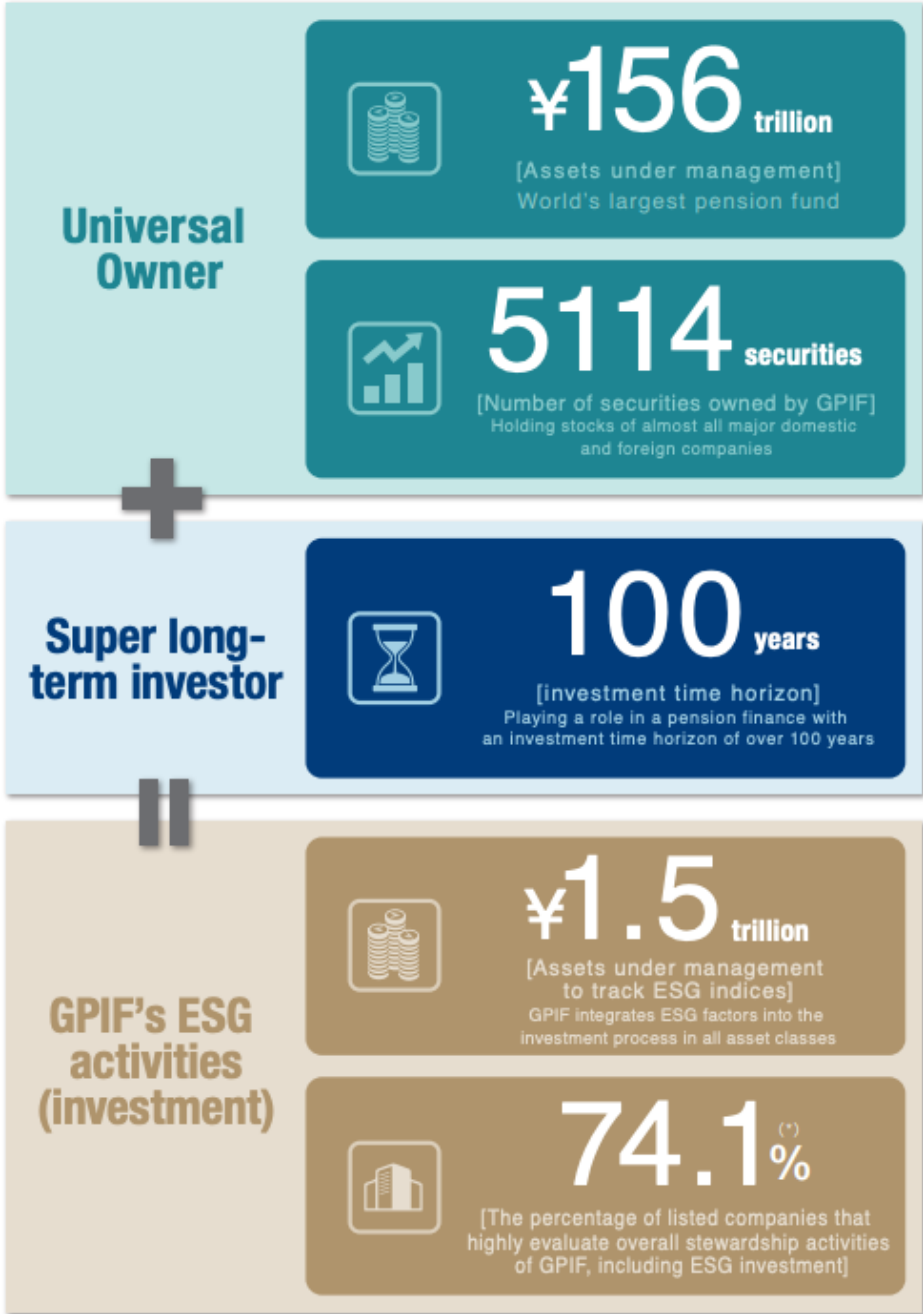
- As a policy maker, who should we motivate first to set a better (more ambitious) goal?

Target	Actions
Firms that with relatively poor financial performance	<ul style="list-style-type: none"> <li>Financial incentives for carbon neutral commitment and technology</li> </ul>
Firms that have higher than or lower than average and mean ESG emission performance	<ul style="list-style-type: none"> <li>Motivate firms for higher transparency of their actual emission performance to the public</li> <li>Mandatory transparency</li> </ul>
Firms that performed at average level for both financial and emission	<ul style="list-style-type: none"> <li>Award selected firms with prestigious award for ambitious goal and achievements</li> </ul>
Government owned investment fund or retirement fund (e.g., MPF)	<ul style="list-style-type: none"> <li>Prioritize investment towards ESG active firms and business models</li> </ul>

# GPIF and ESG in numbers

## Japan's Government Pension Investment Fund

World's largest asset management



# 港澳消費者 可持續時尚 認知調查 2022

調查團隊：

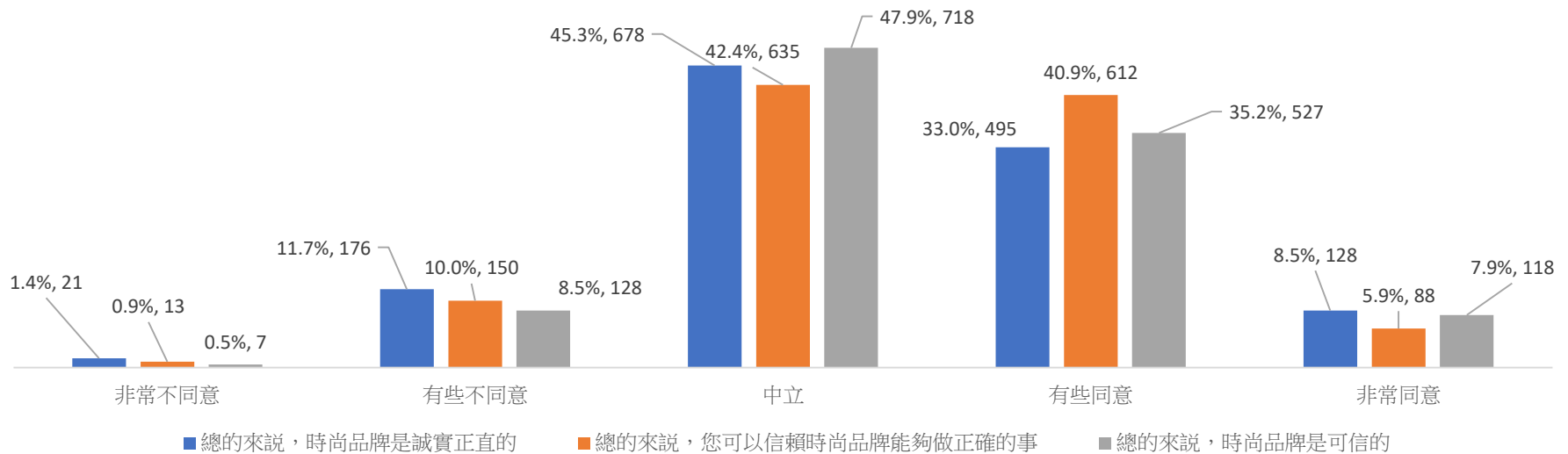
Dr. Di Fan 范迪博士

Dr. Chris Lo 盧君宇博士

Ms. Audrey Yan 晏維清女士

# Customer's trust on Brand's sustainability efforts

19.下面是一組有關時尚行業的看法，請您指出您對這些看法的同意程度



- 受訪者對時尚品牌的信任度偏保守，較多受訪者（約四成半）對於時尚品牌是否「誠實正直」、「可以信賴」及「能夠做正確的事」取中立態度。
- 消費者信任度對其購買零碳產品的傾向顯著相關
- 女性相對於男性對品牌的不信任度更高





1. Proactive communications
2. Verifiable product level traceability
3. Supplier development
4. Third-party verifications
5. Audited Sustainability reports
6. Stakeholder engagement (with NGOs)

# VF supply chain map

TEST DATA APP

Product Supply Chain Map: **Men's Lone Peak 4.5**

Change Product...



The updated version of our original trail shoe features a trimmed down layer that offers added flexibility and comfort and a simplified lacing system for improved micro-adjustment. Like all previous versions, the Lone Peak 4.5 includes all of the Altra trail shoe must-haves like StoneGuard™, MaxTrac™, Balanced Cushioning and the FootShape™ toe box. To top off the update, the midsole foam formula has been tweaked just enough to give you a more resilient feel underfoot.

SS20

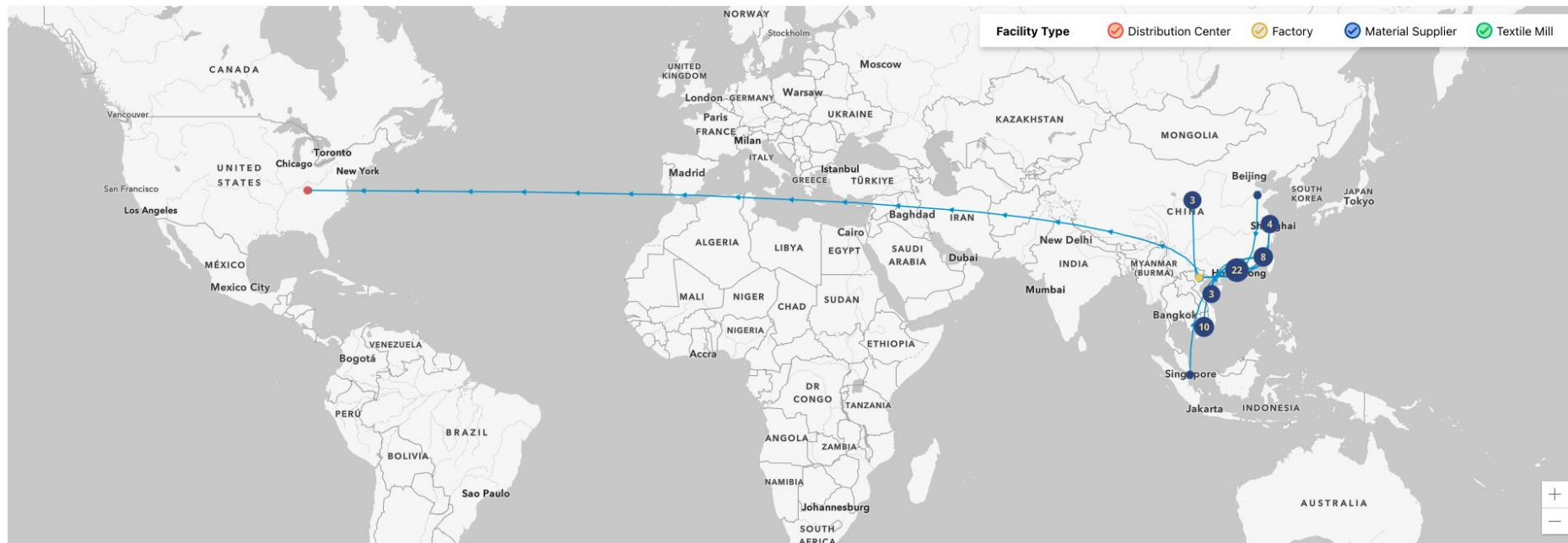


[View Product](#)

Data as of March 2020

Story Element Filters (More info): [Clear Filters](#)

- Chem IQ
- Community
- Energy Efficiency
- Water Efficiency
- Zero Waste



# VF supply chain map



## Dongguan Ao Xi n Shoes Material Co., Ltd.

*Footwear Manufacturer*

Produced here: **Vamp Processing Print & Laser, Vamp Processing Print**

15 Shi Ni u Ma Road, Datang Industrial Zone, Houjie Town, Dongguan,  
Guangdong, Chi na

# male employees: **24**

# male production workers: **5**

# female employees: **22**

# female production workers: **3**

Community Programs: **Tree Planting, Community Service, Blood Donation**

Environmental Programs: **Waste Reduction**

Worker Programs:

**Staff Annual Trip, Staff Canteen, Safety Education Training & Education,  
Dormitories, Trade Union**

Chemical Management Certs: **No data available**

Health Safety Social Certs: **No data available**

Sustainable Material Certs: **No data available**

**Footnote: Information provided by supplier, not verified by VF.**



**Vi nh hi nh Tradi ng General Joi nt St ock Company**  
*Foot wear Manufact urer*

Produced here: **Fi ni shed Product**

Hal net Number 8, Ki m Long Commune, Tam Duong, Vi nh Phuc, Vi et nam

# male employees: **339**

# male production workers: **308**

# female employees: **1506**

# female production workers: **1381**

Community Programs: **Tree Pl anti ng, Donati on Programs**

Environmental Programs: **Energy Savi ng Equi pment, Sol ar Energy, Waste Reducti on, Rai nwater Harvesti ng, Waste Recycli ng**

Worker Programs: **Medi cal Cli ni cs, Staff Canteen, Safety Educati on Trai ni ng & Educati on, Transportati on Assi stance, Trade Uni on**

Chemical Management Certs: **No data avai l abl e**

Health Safety Social Certs: **Compl i ance Audi t**

Sustainable Material Certs: **No data avai l abl e**

**Footnote: I nformati on provi ded by suppl ier, not veri fi ed by VF.**





LOCATION ▾

# RALPH LAUREN



THE POLO SHIRT

MEN

WOMEN

CHILDREN

WORLD OF RALPH LAUREN



## SUSTAINABLE PRODUCT DESIGN

All of our design, production and merchant teams will receive annual training on sustainable, circular, inclusive and culturally aware design by 2020



## SOURCING & TRACEABILITY

100% of our key materials will be sustainably sourced by 2025

100% of animal-derived materials—as covered in our animal welfare policy—will be certified or traceable by 2025



## CHEMICAL MANAGEMENT

We will eliminate the use of hazardous chemicals in our supply chain by 2025



## CLOTHING TO MATERIALS

### Reducing noise from internal combustion engines and from the high frequencies of electric vehicles

The roughly 20% of clothing donations that cannot be reused are transformed into soundproofing materials for automobiles or high-calorie solid fuel (RPF)\*1. Approximately 22 T-shirts (4.3kg clothing weight)\*2, are cut, turned back into fiber, and recycled into enough soundproofing material for one car, reducing engine noise in a petrol car and high-frequency waves in an electric car.

\*1 Japan Only

\*2 Assumes 1 T-shirt weighs 200g (Source: Nihon Tokushu Toryo Co. Ltd.)





**GLOBAL  
PARTNERSHIP**

REUSE



**CLOTHING TO  
FUEL**

RECYCLE



**CLOTHING TO  
MATERIALS**

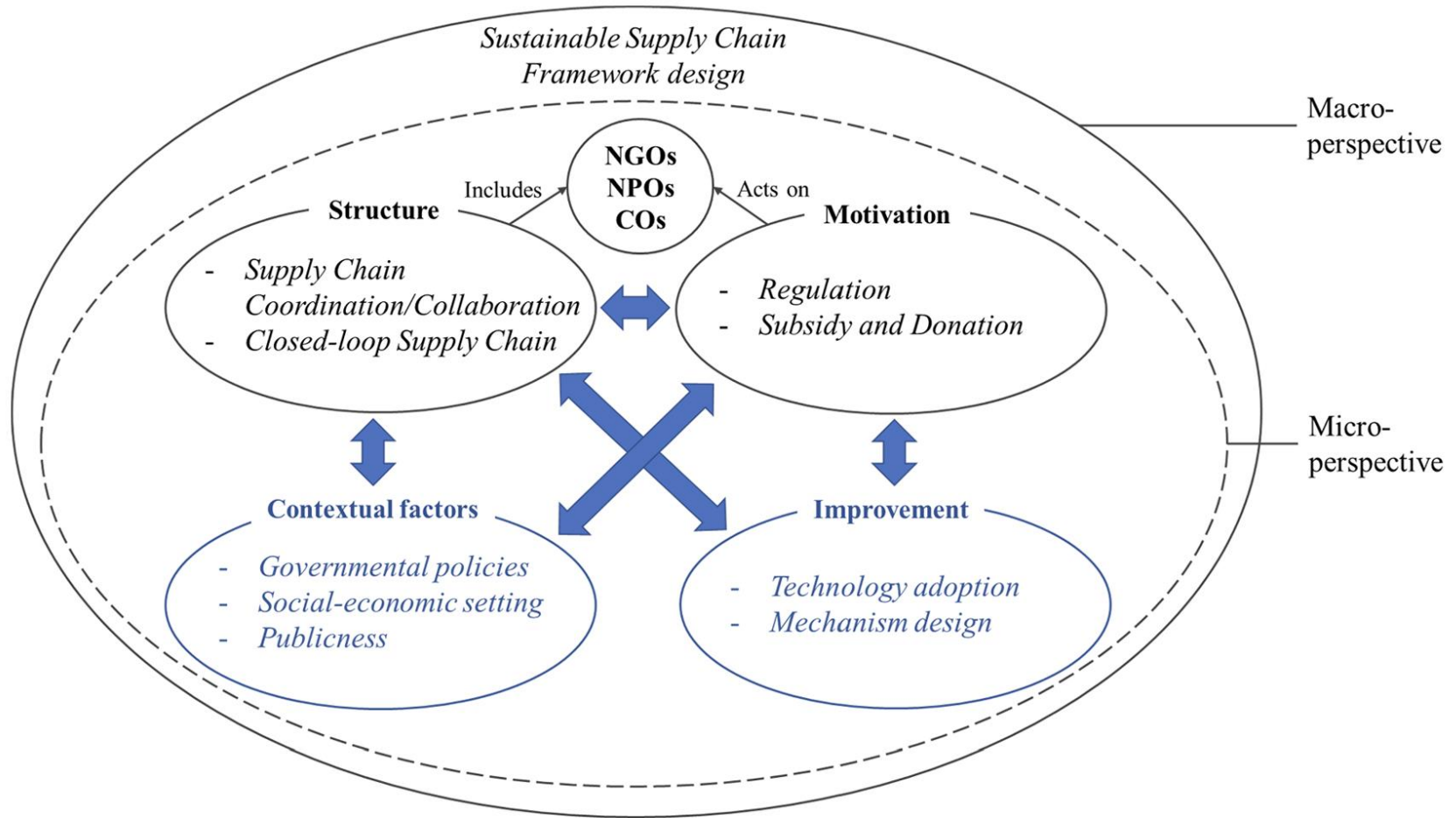
RECYCLE

**Partners**



samusocialdeParis





**Fig. 11.** New research framework of SSCM with organizations.

Xu, Xiaoyan, Sai-Ho Chung, Chris KY Lo, and Andy CL Yeung. "Sustainable supply chain management with NGOs, NPOs, and charity organizations: A systematic review and research agenda." *Transportation Research Part E: Logistics and Transportation Review* 164 (2022): 102822.





# Patagonia Action Works

For almost 40 years, Patagonia has supported grassroots activists working to find solutions to the environmental crisis. But in this time of unprecedented threats, it's often hard to know the best way to get involved. That's why we're connecting individuals with environmental organizations, to take action on the most pressing issues facing the world today.





# *The* **SPIN OFF**

*Modern. Matters.*

[NEWS](#) [GALLERIES](#) [VIDEOS](#) [EVENTS](#)

[NEWSLETTER](#) [MEDIA INFO](#) [Q](#)



Yvon Chouinard,  
founder, Patagonia

Photo: Patagonia

[HOME](#) / [NEWS](#) / [STORIES](#)

THE BRANDS

## **Patagonia's new owner is the non-profit Holdfast Collective**

